FINAL REPORT

GRANT TITLE: Survey of Small, Non-Game Mammals at Red Slough Wildlife Management Area

OBJECTIVES

To document the presence and habitat affinities of small mammals, particularly rodents, shrews, and bats, at Red Slough WMA, Ouachita National Forest, in southeastern Oklahoma.

APPROACH:

We surveyed small, non-game mammals at Red Slough Wildlife Management Area on 14 – 19 December 2009, 21 – 27 May 2010, 21 – 27 June 2010, and 17 – 22 July 2010. We divided the management area in quadrants and each trip we trapped a different quadrant. Each night we established 8 trap lines of 400 Sherman live-traps and all traps were checked near sun-up the following day. Additionally, for the May and June trapping sessions, mist nets were established several nights in an attempt to survey bat species. These nets were established in habitats that appeared to be natural flyways.

RESULTS:

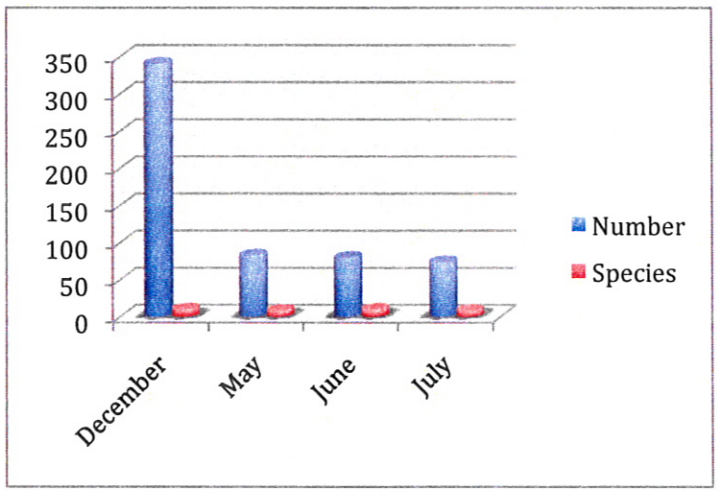
Twenty-six nights of trapping resulted in 576 captures representing 4 species of bats, 13 species of rodents, 2 species of shrews, a squirrel. A small number of these individuals were processed as voucher specimens with skins, skulls, and tissues transported back to the Collection of Vertebrates, Oklahoma State University. Additionally, personnel of the Red Slough Wildlife Management Area provided us with 4 beavers, an opossum, and a nutria. Following are the specimens we recorded at Red Slough Wildlife Management Area during these four collecting trips. The column "Number Captured" documents the number of individuals captured each trip followed by the total number of that species captured.

COMMON NAME	SCIENTIFIC NAME	NUMBER CAPTURED	
Marsupialia			
Virginia Opossum	*Didelphis virginiana*	1,0,0,0	1
CHIROPTERA			
Southeastern Myotis	*Myotis austroriparius*	0,5,0,0	5
Little Brown Myotis	*Myotis lucifugus*	0,1,0,0	1
Red Bat	*Lasiurus borealis*	0,2,2,0	4
Seminole Bat	*Lasiurus seminolus*	0,1,0,0	1
Insectivora			
Southern Short-tailed Shrew	*Blarina carolinensis*	2,1,3,1	7
Least Shrew	*Cryptotis parva*	1,5,3,4	13

COMMON NAME	SCIENTIFIC NAME	NUMBER CAPTURED	
Rodentia			
Southern Flying Squirrel	*Glaucomys volans*	1,0,0,0	1
Beaver	*Castor canadensis*	2,0,0,2	4
Marsh Rice Rat	*Oryzomys palustris*	41,19,14,25	99
Fulvous Harvest Mouse	*Reithrodontomys fulvescens*	227,2,2,4	235
Cotton Mouse	*Peromyscus gossypinus*	25,23,15,27	90
White-Footed Mouse	*Peromyscus leucopus*	6,1,4,1	12
Deer Mouse	*Peromyscus maniculatus*	0,2,2,0	4
Golden Mouse	*Ochrotomys nuttalli*	6,0,0,0	6
Hispid Cotton Rat	*Sigmodon hispidus*	25,20,30,11	86
Eastern Wood Rat	*Neotoma floridana*	4,0,4,0	8
Nutria	*Myocaster coypus*	1,0,0,0	1
Pine Vole	*Microtus pinetorum*	0,1,1,0	2
House Mouse	*Mus musculus*	0,0,0,1	1

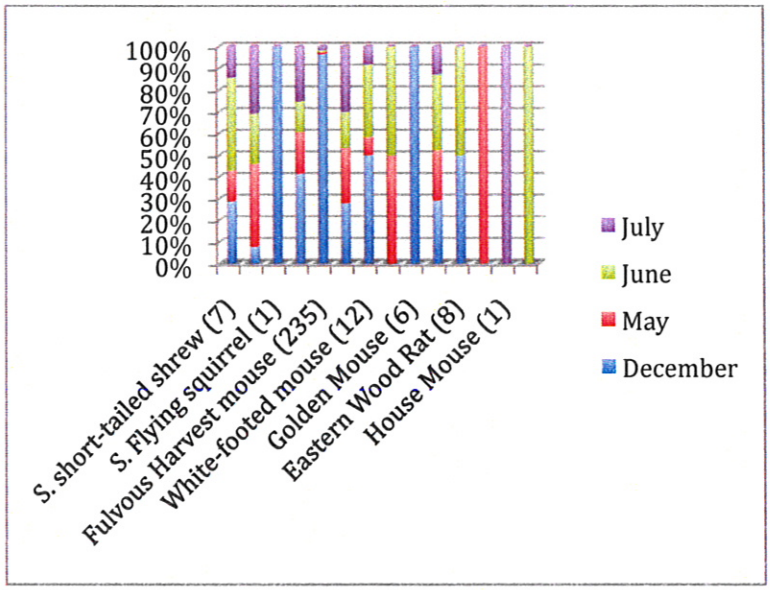
Documentation of the Least Shrew (*Cryptotis parva*), Little Brown Myotis (*Myotis lucifugus*), and Deer Mouse (*Peromyscus maniculatus*) are new records for McCurtain Co. Moreover, the Southeastern Bat (*Myotis austroriparius*), Little Brown Myotis (*Myotis lucifugus*), the Red Bat (*Lasiurus borealis*), the Seminole Bat (*Lasiurus seminolus*), the Marsh Rice Rat (*Oryzomys palustris*), the Cotton Mouse (*Peromyscus gossypinus*), the Deer Mouse (*Peromyscus maniculatus*), the Golden Mouse (*Ochrotomys nuttalii*), and the Pine Vole (*Microtus pinetorum*) are new records for Red Slough Wildlife Management Area.

Because we trapped in winter (December), late spring (May), early summer (June), and mid-summer (late July), we are able to examine trap success across these seasons (Fig. 1). Although 400 Sherman live-traps were set each night, trap success was considerably higher in December than any other time of year with 341 small mammal captures in December, while during each of the remaining three trips we collected only about 80 small mammals. Possible explanations for the decrease in trap success from May through July are the abundance of natural food sources available to the animals at this time of year and the presence of fire ants, which are known to limit the time many small mammals spend on the ground.



For the 14 species that we anticipated collecting each trapping session, we plotted the percentage of total captures for each species across the four trapping sessions. Although seven of the 14 species were collected in each trapping session (Fig. 2), it is interesting to note that of the 235 Fulvous Harvest mice we collected, 227 were collected during December. It is also interesting to

note that we only collected the Golden Mouse during the December trip. Again, this may have been related to the increased activity of fire ants during the summer months. Both the Fulvous Harvest Mouse and the Golden Mouse are agile climbers and will spend most of their time higher in the grasses and brushy vegetation, especially in the presence of fire ants.



We are in the process of writing a manuscript, most likely for publication in The Occasional Papers, Texas Tech University, documenting the results of this survey and highlighting new species records for Red Slough WMA and McCurtain County.

PREPARED BY

Ronald A. Van Den Bussche, Department of Zoology
Oklahoma State University, Stillwater, Oklahoma

Meredith J. Hamilton, Department of Zoology
Oklahoma State University, Stillwater, Oklahoma

David M. Leslie, Jr., Leader, Oklahoma Cooperative Fish and Wildlife Research Unit, Stillwater, Oklahoma

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